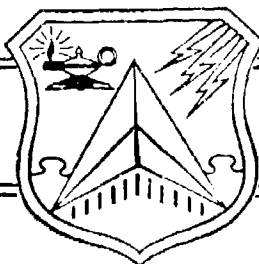


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PERFORMANCE AS A FACTOR IN
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RESEARCH REPORT

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AIR WAR COLLEGE
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REPORT NO. MS114-81

PERFORMANCE AS A FACTOR IN ENLISTED PROMOTIONS

by

Earl R. Reinke, Jr., [REDACTED]
Colonel, USAF

A RESEARCH REPORT SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE RESEARCH
REQUIREMENT

MAXWELL AIR FORCE BASE, ALABAMA

April 1981

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The report

AIR WAR COLLEGE RESEARCH REPORT SUMMARY
NO. MS114-81

TITLE: Performance as a Factor in Enlisted Promotions

AUTHOR: Earl R. Reinke, Jr., Colonel, USAF

Reviews the events which led to the adoption of the Weighted Airman Promotion System (WAPS) and its stated objectives, Examines several promotion cycles and the manner in which the WAPS factors interact to make promotion selections. Reports on field research conducted to determine if there is discrimination within the Airman Performance Report beyond WAPS' capability for data capture, Concludes that a revalidation of WAPS, similar to its original field test, is overdue.

BIOGRAPHICAL SKETCH

Colonel Earl R. Reinke, Jr. (M.P.A., Auburn University) has been involved with enlisted personnel throughout his military career. A former NCO, he has served as an aircraft commander and command post controller in MAC, as chief of plans and mobility for the tactical control system in Korea, as chief of the Operational Reports and Briefing Branch at MAC Headquarters, as secretary for JCS and NSC matters at Headquarters USAF, and as a unit commander. Colonel Reinke is a graduate of the Air Command and Staff College and the Air War College, class of 1981.

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CHAPTER I

INTRODUCTION

The United States Air Force has a grade structure for its enlisted personnel designed to facilitate the effective accomplishment of its mission. The underlying philosophy of this grade structure is expressed in official terms in the USAF Personnel Plan which notes that one of the purposes of grades is to "furnish the means of distinguishing leadership and supervisory levels in an ascending progression." (19:4-8) The plan goes on to explain the objective of the promotion system which moves airmen upward through this grade structure by calling for the advancement of those airmen "who have demonstrated potential for increased responsibility." (19:4-8) This statement of promotion policy is echoed in the Air Force regulation governing enlisted promotion policy, AFR 39-29, Promotion of Airmen. It states that "the basic promotion policy is to advance airmen who show potential for more responsibility through an objective and visible promotion system." (15:2)

The present system used to promote airmen to grades E-5 through E-7 is known as the "Weighted Airmen Promotion System" (WAPS) and dates from 1968 when it was approved by the secretary of the Air Force. The idea of the new system was to use "more measurable criteria in evaluating the contenders and making promotion selections." (10:13)

This new promotion system was conceived in response to criticism from Congress. Members of the House Committee on

Armed Services had received numerous complaints from enlisted personnel regarding their services' promotion procedures. A major portion of these complaints, over 90 percent, were from Air Force personnel. The dissatisfaction focused mainly on the following weaknesses of the decentralized board system in use at the time: first, airmen were not told why they had not been selected, nor were they given their relative ranking among their peers; second, they had little or no idea of what they might do to improve their chances for future promotion. (24:1) The congressmen saw visibility as a significant consideration in a promotion system. (10:15-16)

By implementing WAPS, the Air Force hoped to provide more visibility and equity in airmen's promotions and to forestall further criticism. The Air Force Auditor General noted in 1974 that the purpose of WAPS was to provide an objective and visible promotion system. (1:1) This appraisal was echoed by the Air Force Human Resources Laboratory which stated that WAPS' purpose was to increase knowledge of promotion standing and insure equitable promotion opportunity. (23:1) An interesting point to note is that neither of these official inquiries into the success of the newly instituted promotion system expressed concern for the identification of leadership qualities or of ability to supervise and motivate others.

One is led to question whether WAPS has been successful in achieving its goals. Since each airman who fails selection in any cycle is provided with his or her score, as well as the

minimum score required for selection, all of the unsuccessful contenders know precisely how close they were to selection and their areas of weakness. There is a good deal of visibility built into the system. In terms of acceptance of WAPS by personnel competing for promotions, there was a 70 percent reduction in the number of congressional inquiries regarding promotion after only one year of operation of WAPS. (10:15-16) A study of the attitudes of airmen toward the new promotion system revealed that there were mixed feelings about it. Those who were not selected tended to view the system as less fair than those who were selected. "Pluralities of both groups felt that WAPS was fairer than the whole-man system with promotion boards." (23:7-8) It would appear that WAPS provides visibility and is well accepted by enlisted personnel.

Statement of the Problem

At this point, one might ask why the system should be studied further if it has met with general acceptance within the enlisted force. Is it not doing the job it was intended to do? The reader's attention is redirected to the Air Force's stated policy regarding grade structure and promotion: the identification of airmen who have demonstrated their ability to assume positions of greater responsibility. By providing visibility and equity, WAPS fulfills the needs of the enlisted force, and judging by study results, has been successful in this regard. In order to meet the institutional needs of the

Air Force, however, the promotion system must also identify and promote those individuals capable of assuming leadership and supervisory roles. This is its stated purpose:

As a former commander and staff supervisor, the author has certain misgivings about WAPS' capability to identify the outstanding performers and potential leaders. Airmen have been selected for promotion ahead of others who, in the author's judgment, had far more leadership potential. This concern has been reinforced by similar experiences of the author's colleagues at Air War College who have also served in command and staff supervisory positions.

Some of the Air Force's most senior enlisted leaders have expressed concern over the quality of today's enlisted leadership. At a recent meeting of the senior enlisted representatives from the major commands of the Air Force, it was noted that the Air Force has been giving junior enlisteds material benefits, but not leadership. There was concern that today's noncommissioned officers (NCOs) were not working hard enough at providing the common bond that older NCOs had provided. (25:37)

The need for leadership at the higher enlisted grades was emphasized by the Assistant Secretary of Defense for Manpower, the Honorable Thomas D. Morris, in his testimony before the Special Subcommittee on Enlisted Promotion Policy Review. He responded to members' comments regarding enlisted

men being technicians and specialists as opposed to officers who are generalists by observing:

I also feel that in the upper technical grades in all the services--where supervisors and superintendents often have major management-type responsibilities in our maintenance facilities, depots, et cetera--that leadership characteristics are very important. (21:6418)

Thus the secretary refuted the notion that enlisted men are merely technicians going about a specific task. There is a need for the ability to lead and motivate others. How does the promotion system balance technical expertise with those intangible factors of human relations we sometimes refer to as leadership potential?

The Weighted Airmen Promotion System considers three general areas, six measurable factors, to arrive at an overall promotion score for each competitor. Technical and general military knowledge are tested, seniority is calculated, decorations are considered, and the mean of the most recent 10 performance reports is factored and entered. Air Force Regulation 39-29 provides the following maximum allowable points for each of the six factors: (15:9-29)

Specialty Knowledge Test (SKT)	100 points
Promotion Fitness Examination (PFE)	100 " "
Time in Service (TIS)	40 " "
Time in Grade (TIG)	60 " "
Decorations (DEC)	25 " "
Airman Performance Reports (APRs)	135 " "

The reader must bear in mind that WAPS is an automated selection system and, consequently, relies on factors readily quantified for entry into a computer data base. The Air Force

recognized the limitations inherent in an automated system. Therefore, the initial field test of WAPS used a promotion board as a base line against which WAPS results were correlated. Since there was a high degree of correlation, the need to have a promotion board in conjunction with WAPS was ruled out. (11:2) Note that performance on one's job as evidenced by the APR score was weighted at 135 points--30 percent of the maximum possible score.

If performance is the most heavily weighted factor in WAPS, why should there be any concern over the selection process? This is a legitimate question. The answer lies in the fact that any one of the factors is operative in the selection process only to the extent to which it makes a qualitative discrimination between contenders. For example, if all candidates had the maximum of 25 points for decorations, that particular factor would play no part since selection depends on a point differential. Other factors would actually carry an even greater weight, since they would represent a larger proportion of the aggregate points for the remaining factors. This is precisely what has happened to the performance factor. As early as 1972, it was noted at the Air Force Human Resources Laboratory (HRL) that APRs had become so inflated that many airmen were approaching maximum scores. This fact tended to increase the weight of other factors. (2:8) In the 1980 E-8 selection cycle, the average APR score for selectees was 134.95, only .05 points from the maximum allowable total. (5:6)

If the part played by performance has been negated by APR inflation, which factors are making the selections? A 1974 study of the security of the promotion testing program noted that the two tests, SKT and PFE, are the most significant factors in determining whether or not an airman is to be promoted. (18:2) Such a situation contravenes the original intent of the program as evidenced by the field test cited on page 6. If undue weight is placed on test scores, promotions would seem destined to go to those with the greatest technical knowledge or the greatest verbal skill, that is, those who test well. Is this good or bad?

A recent article in The New York Times asserted that the services might be going too far in rationalistic personnel policies. It noted the fallacy in the assumption that quantifiable human qualities are more important than those which are difficult to quantify. (8:30) The article further noted that:

Almost every study of productivity in American industry or of success in the economy, as well as of courage in combat, has shown that the intangibles of character--enterprise, aggressiveness, drive, willingness to risk--are much more important than the measurable quotients of classroom ability. (8:44)

These intangibles such as human relations, acceptance of responsibility, bearing and behavior are factors used in the Airman Performance Report.

When one reviews the previous research into the matter of enlisted promotions, one senses a feeling of corporate "deja-vu." An Air War College research report noted in 1952 that the

Air Force NCO corps had been "destroyed" during World War II by the promotion of technicians to NCO grades as a reward for their skills. It suggested that NCO status be reserved for those who have demonstrated their fitness to lead. (16:1-3) The study went on to observe that Air Force promotion policies do not "deprive the poor leaders of authority." (16:20) One wonders if the Air Force has not run the full cycle. If it ignores the intangible traits of character in the promotion process, what assurance does it have that those selected will exhibit a mastery of those traits when placed in positions of authority?

The problem for this study, then, is to determine to what extent the intangible characteristics of airmen, as evaluated by their supervisors and commanders, influence the promotion selection process. Air Force leadership needs assurance that the future leadership and supervision needs of the service will be fulfilled.

Objective

The overall objective of this study is to evaluate the extent to which job performance and leadership qualities influence promotion selection of airmen to grades E-5 through E-7 under WAPS. The study will attempt to determine what role performance plays and how the performance factor acts, or fails to act, as a discriminating variable. The study will test the following hypothesis: Performance does not act as a discriminating variable in the Weighted Airman Promotion System.

Limitations

The author's original intent was to conduct a selection board procedure here at Air War College using a sample of airmen's records, both selectees and non-selectees, from a recent promotion cycle. This proved to be infeasible for several reasons. The administrative problems associated with the identification of the sample population and the capture of the necessary WAPS data at the local level were prodigious. For a selection board process to have validity, the statistical and qualitative controls exercised by the promotion secretariat at the Air Force Manpower and Personnel Center would need to be scrupulously duplicated. Such duplication proved to be beyond local capability. For these reasons, the study has been limited to statistical analyses of promotion results, a comparison of these results with the original guidelines of WAPS, and an analysis of Airman Performance Reports sampled from the Maxwell AFB Central Base Personnel Office.

Assumptions

The underlying assumption of this study is that the Air Force truly intends to promote airmen according to the guidelines in its personnel plan and promotion regulation. Leadership and supervisory skills, and demonstrated potential for increased responsibility should be rewarded by advancement in the grade structure.

It is further assumed that no significant change in the performance reporting system (e.g., a controlled report) is likely in the near future. The trauma of the Officer Effectiveness Report experience of the 1970s will be with us for quite a long while.

Organization of the Study

In order to study the role of performance in the promotion process, it is necessary to understand clearly the role that performance was intended to play. Chapter II is devoted to a review of the events leading up to the adoption of WAPS, with particular attention to guidelines set down by the House Committee on Armed Services' Special Subcommittee on Enlisted Promotion Policy Review.

Using those guidelines as the theoretical framework, chapter III examines the actual results of the promotion selection process. These are then compared with the guidance to determine whether WAPS is performing its intended role.

A statistical evaluation of the various measures of performance and leadership potential contained in the Airman Performance Report is contained in chapter IV. The effort here is to attempt to demonstrate that there are levels of performance--outstanding, average, and below average--that can be observed in performance reports, even without reading the narrative comments that would be available to a selection board.

Chapter V is a summary discussion of the data presented in the study. An attempt is made to draw all of the disparate elements together into a cohesive whole.

Finally, chapter VI is devoted to a discussion of the conclusions arrived at from the study. Certain recommendations are offered for the reader's consideration.

CHAPTER II

THE PURPOSE AND PROBLEMS OF WAPS

The Aims of a Promotion System

In the previous chapter we learned that the purpose of the Air Force's enlisted grade structure is to distinguish levels of leadership and supervision, and its basic promotion policy is to advance airmen who show their readiness to take on increased responsibilities. How should the system serve the institution and how does one identify leadership and supervisory potential?

The basic goal of the Air Force, as is true of any military organization, is to accomplish its mission. A high level of productivity of assigned personnel is as necessary to the Air Force in its mission activities as it is to business and industry. In their discussion of the nature of a promotion system, Pigaro and Meyers argue that promotions should reward those who are highly productive. (14:309) The reward of superior job performance can actually enhance performance and productivity. Workers who know that their productivity is a factor in their consideration for promotion are motivated to excel in their daily performance. (10:39) The antithesis of this argument was expressed by Calhoon who noted that ". . . if employees feel that they will be promoted regardless of performance they will have less incentive. . . ." to excel. (4:317)

As we have seen, the Air Force wants to identify potential leaders and supervisors. What is leadership and how can it be identified as a trait? Freeman and Taylor, in their book How To Pick Leaders, define leadership as an ". . . ability to create group action toward an organizational objective . . ." while maximizing each individual's effectiveness and cooperation. (7:40) They go on to point out that men lead in any number of ways. "Only one thing stands in common--- control of the interpersonal situation." (7:14) Thus, leadership is a function of human relations. They tie leadership to organizational performance by saying:

But what seems to mark the uncommon man, the leader whose leadership leads to action, is the effective utilization of energy, his own and that of the people working with him. (7:222)

In a study which compared Air Force promotion policies with those of industry, three elements were identified as integral to a promotion system. Seniority was seen as an element which reduced friction and was typically favored by unions. Appraisal was a measure of potential rather than performance, and performance ratings measured productivity in the current job. (13:14-22) We saw in the previous chapter that the Air Force attempted to blend these factors into its enlisted promotion system.

The Purpose of WAPS

We noted in the first chapter that WAPS was conceived in response to congressional criticism. The tone was set by

the comments of the Chairman of the House Committee on Armed Services, the Honorable L. Mendel Rivers:

Nobody has a right to be promoted; but he does have a right to equal consideration with his fellow airmen. He has a right to be told honestly if he is not capable of promotion. He has a right to understand the system he lives by. (21:6325)

Thus the chairman laid the theoretical framework; no one has an inherent right to be promoted but he should be able to understand why he was--or was not--selected.

This problem of the lack of "visibility" in the Air Force's enlisted promotion system was amplified in the report of the Special Subcommittee on Enlisted Promotion Policy Review created by Chairman Rivers. It said:

Many of the promotion problems are due to a lack of visibility. Visibility means the extent to which a man is able to see how promotions are determined, where he stands in the relative competition, why he was not one of those selected and how he must improve himself to have a better chance for promotion in the future. The great lack of visibility, together with other promotion shortcomings, has led to a serious morale problem among enlisted men in the Air Force. (20:7309)

Given such pointed criticism of the Air Force for its lack of visibility in its promotions, one can understand the concern of personnel planners in maintaining a promotion system which is visible and rationalistic. The problem stems from the fact that there was other guidance in the report regarding the desired characteristics of the system. The subcommittee report said that the primary emphasis ought to be on skill--both knowledge and performance--and that the system should provide a measurement of differences so that the best qualified might be identified. (20:7349)

After the new system had been designed, it was field tested in the Alaskan Air Command by the Air Force's Human Resources Laboratory using promotion boards as a baseline against which WAPS results were correlated. The original thought was that there might be a need to conduct a board proceeding in conjunction with the computerized process. But since there was such a high degree of correlation between the board results and those of WAPS, the need to supplement WAPS with boards was ruled out. (11:2) This field test used a newly developed statistical procedure called "policy capturing," which has since become popular in studies by the Human Resources Laboratory. (9:5-6)

The difficulties in designing an analytical promotion system were not overlooked during the developmental process. In his testimony before the special subcommittee, the Honorable Thomas D. Morris, Assistant Secretary of Defense for Manpower said: "The evaluation of leadership potential is something very difficult to quantify through tests or other numeric factors." (21:6418) In order to assuage the concerns of members of the special subcommittee that performance might be subordinated in the new system, the congressmen were briefed on the Air Force's new regulation governing Airman Performance Reports with its "restrictive" ratings, which would control the problem of rating inflation. They were told that only 15 percent of the airmen rated could receive the top rating of "nine." The median would occur at the "seven" level, and at least 35 percent of the air-

men rated would receive a rating of "six" or below on a scale of "zero to nine." (22:11076) Based on this assurance, the special subcommittee gave its blessing to the Air Force's new enlisted promotion system. (22:11075) The Air Force agreed to full implementation of the new system by July 1970. (24:1)

Potential Problems of WAPS

If there were to be problems with the new system, what might they be? We have seen that the congressmen and the Air Force were interested in advancing superior performers and potential leaders. Freeman and Taylor note that leaders are more likely distinguished by verbal and intellectual aptitudes than by mechanical aptitudes, by social rather than clerical skills, and that ten times more importance is attached to personality than to aptitude and proficiency combined. (7:22) Gilder observed that the aptitude for group leadership--a trait common to every society--is hard to measure in an examination. (8:44)

Realizing these limitations of an analytical system, the Air Force built a formula intended to replicate the factors considered important by promotion boards. Boards paid great heed to the Airman Performance Reports, so APRs were heavily weighted under WAPS. (2:8)

This concept was reinforced in 1972 by the Human Resources Laboratory in the development of a promotion system for Air Force basic trainees. The study recommended that the

evaluation by the military instructor be heavily weighted, and that the scores on the written tests not even be considered.

(3:17) Notably, there was a high degree of discrimination in the ratings because of a forced spread. The highest rated trainee was awarded a rating of 100, and the rest followed at two-point intervals. (3:8)

The study used the "policy capturing" technique alluded to earlier. Board members were provided decks of computer cards with data arrays, and were asked to rank order the airmen represented by those data. Correlation analyses were then performed to "capture" the promotion "policy" of each board member. (3:5) This is a useful technique, but it has an inherent fault in that the board members are limited by the researcher. If one field of data does not discriminate among competing records, the board must rely upon other data fields since the cards must be rank ordered. Study results indicate that the researchers assume that a board member's "policy" under such circumstances is to discount that nondiscriminating parameter when in fact it may be considered to be of primary importance to him. It simply could not be used to discriminate on the basis the data provided.

Further evidence of the Air Force's reliance on performance as a discriminating factor can be seen in the reaction to the suggestion that promotion consideration ought to be given to airmen's educational accomplishments. The position taken by the Air Force was that if education really contributes

to an airman's promotability, it should affect other selection factors such as skill testing and performance ratings. (12:8)

The problem begins to become clear. Leadership and performance are expected to be strong considerations in the promotion selection process. This is the will of the Congress and the stated policy of the Air Force, and it is supported by the literature of personnel management. The traits of leadership are difficult to measure in tests, and we tend to rely upon the observations of superiors as contained in performance reports. For an analytical system to use a factor as a discriminating variable, that variable must indeed discriminate. If it does not, other factors, which do discriminate, will control the process. If performance is to play effectively in identifying our future enlisted leaders and supervisors, WAPS must be able to discriminate between the outstanding, the average, and the below-average performers. Its ability to accomplish that task is the subject of the next chapter.

CHAPTER III

PERFORMANCE AS A DISCRIMINATOR

The previous chapters have developed an overview of the events leading up to the adoption of WAPS by the Air Force. The new system was intended to blend knowledge, seniority, and performance factors together in a computer model which would provide visible, equitable promotions to those most ready to accept greater responsibilities. It has been demonstrated by various studies that enlisted personnel seem to generally accept the new system as equitable--at least when compared with the system it replaced. But how effective is WAPS when it comes to singling out the better performers--those who might have future leadership potential? To gain insight into this part of the equation, we will now examine a sample profile of the enlisted force and the results of actual promotion cycles.

A Profile of the Force

Before looking at the results of promotion cycles, the reader should examine the body of competitors for promotion. By doing so, he will have a better understanding of the manner in which the six factors used in WAPS act as variable determinants in the selection process. A statistical analysis of the 1977-A promotion cycle to technical sergeant (E-6) was obtained from the Directorate of Personnel Plans, Headquarters, USAF. It provides the mean and standard deviation in each of

the six variables for the entire group of 73,000 competitors in the cycle. Then it undertakes a detailed analysis of a sample of 300 of these airmen. Throughout this analysis, the data are presented in the same manner: SKT and PFE are the number of correct answers on a 100 question examination. This is the actual score used in WAPS. TIS and TIG are expressed in months. In WAPS, TIS is credited with two points per year and TIG one-half point per month. DEC is the actual WAPS score for decorations, and APRM is the mean of the APRs which qualify for the cycle.

TABLE 1

MEANS AND STANDARD DEVIATIONS OF 70,000 COMPETITORS (17:10)

<u>Factor</u>	<u>Mean</u>	<u>Std Dev</u>
SKT (Skill Knowledge Test)	53.19	11.43
PFE (Promotion Fitness Exam)	61.62	10.33
TIS (Time in Service)	130.68	39.00
TIG (Time in Grade)	62.18	24.02
DEC (Decorations)	1.82	3.14
APRM (Airman Performance Report Mean)	8.78	.32

Bearing in mind that the figures quoted above are an actual representation of the staff sergeants competing for promotion in the 1977 cycle, certain facets of WAPS begin to emerge. The first four factors all appear to have a rather strong central tendency. Both the SKT and PFE are from a possible score of 100. The 130.68 months in service equates to a 21.78 of a possible 40 points based on the formula of two

points per year. Time in grade of 62.18 months would score 31.09 of a possible 60 points. All of these variables have their mean very near the central point of the possible distribution scale. Further, the standard deviations indicate a sizable spread. The decorations score, on the other hand, has its mean at the low extreme, with a relatively large standard deviation. The APR mean of 8.78, however, is nearly at the maximum of 9.0. The standard deviation of .32 indicates a relatively small spread. This is significant to remember as we proceed with our analysis of the sample of 300 airmen and then proceed to look at promotion board results.

TABLE 2

MEANS AND STANDARD DEVIATIONS OF SAMPLE OF 300 AIRMEN (17:10)

<u>Factor</u>	<u>Range</u>	<u>Mean</u>	<u>Std Dev</u>
SKT	29 - 92	56.66	11.52
PFE	32 - 93	66.30	10.24
TIS	64 - 239	126.33	35.94
TIG	22 - 120	61.33	22.96
DEC	0 - 25	1.84	3.18
APRM	7.27 - 9.0	8.83	.29

An examination of Table 2 gives a more detailed view of the relationship of the variables. Each of the first five factors ranges from near minimum to near maximum scores. Some of the eligibles have equalled or exceeded the allowable 10 years in grade and 25 points for decorations. On the other hand, there is a very small spread between the lowest and

highest APR score. As we go on to a more detailed look at the distribution of each of these variables, we must bear in mind that the objective is to determine how each factor plays a role in the selection process. As we will see later, only about 18 percent of the candidates are selected to technical sergeant, and roughly 8 percent to master sergeant. The selection point for each promotion is well to the right-hand side of the curve for candidates. (6:7)

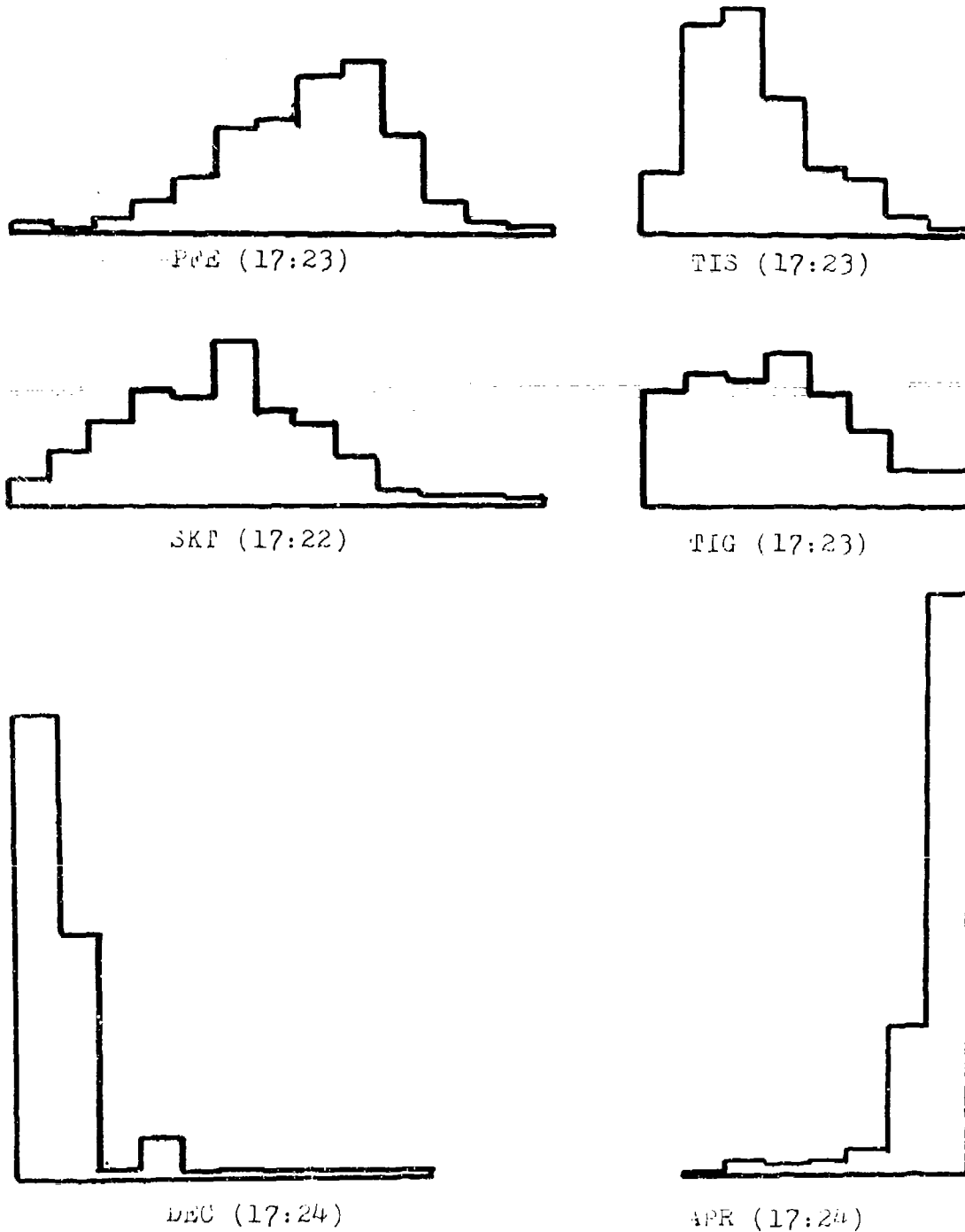
Figure 1 illustrates the distribution of the sample of 300 airmen based upon their SKT scores. Notice that both the mean and the median fall in the 56-60 range. There is a high degree of discrimination to the high side of the central point. Also important is the fact that the top score of 92 gained 63 promotion points over the lowest score of 29, and 35.34 points over the mean score of 56.66. The high score is also beyond the third standard deviation from the mean.

A review of the PFE distribution in figure 1 provides a similar picture--central tendency with a fairly wide distribution. Both the mean and median fall into the 66-70 range, a bit higher than the SKT. There is still good discrimination in the higher range, however, and the spread between the high and low scores is significant.

The distribution of time-in-service scores presents a slightly different picture. The sample is grouped at the more junior end of the array with the mode, mean, and median all falling at the 10-year point. Only 10 airmen have over 17 years

FIGURE 1

DISTRIBUTION OF WAPS SCORES
FOR SAMPLE OF 300 AIRMEN



Note: Numerical tabular data are found in Appendix.

of service, yet they gain 20 points toward promotion over those at the median based on two points per year. This 20 points takes on added significance when considered with the other seniority variable, time in grade. The reader will begin to see how the two examinations and the seniority factors work to make selections at the expense of the performance variables--the performance reports and decorations.

In the time-in-grade scores, we see a pattern fairly similar to the time-in-service scores. In figure 1, we see the measures of central tendency all located at the 5-year point. The lower end of the distribution is more heavily populated, and as with the time in service score, the most senior airmen gain a significant advantage, in this case nearly 30 points.

The score for decorations presents quite a different pattern, with the mode and the median both located at the zero increment. Two cases in the sample have maximum scores of 25 points, a fact which would lead one to believe that they gained a substantial promotion advantage. This may not be true, however. In the author's experience, decorations for airmen seem to be seen most frequently in the aircrew specialties, largely the result of combat duty. In the sample, only six airmen have decoration scores of 11 or better, yet they have a significant impact on the mean, raising it from 1.52 to 1.84. If the author's observation is accurate, they gain relatively little toward promotion since they must compete against one another in their specialty rather than against their less decorated fellow airmen in other career fields.

The distribution of Airmen Performance Report scores follows a pattern much the reverse of that of decorations. On a scale of zero to nine, the APR means are heavily grouped at the higher level. The lowest scores are above seven, and all three measures of central tendency are located at the highest increment. Notably, 73 percent of the sample cases had an APR mean of 8.80 or higher. With a promotion quota of only about 18 percent to technical sergeant, it becomes clear that the APR score, at best, identifies only the poorest performers, and their penalty for poor performance is not nearly so severe in this variable as it was in the tests. For example, the lowest APR score of 7.27 would receive 109.05 points toward promotion when the weighting factor of 15 is applied, as opposed to a perfect score of 135. This is a penalty of 25.95. In contrast, the poorest test scores were penalized over 60 points on each test, a loss much more difficult to overcome, as the reader will see as the results of promotion cycles are analyzed.

It seems appropriate to summarize the results of our analysis of the sample of E-5 data prior to moving forward to the actual results of a promotion cycle. Both of the examinations seem to provide an array of scores that have a strong central tendency along with a wide spread. They seem to be good discriminators, putting those who test poorly at a decided disadvantage and giving the airmen with the best test results a decided advantage over the average achievers. The two seniority factors are both skewed to the right but give sub-

stantially greater points to the most senior airmen s opposed to those with average seniority. The two performance factors have an extreme skew, right-handed for decorations and left-handed for APRs. The advantage to the airman with the highest decoration score is moderate, and only in competition with airmen with few decorations. If numerous decorations are common within the career field, the advantage is largely negated. The performance report scores have such a right-hand bias that they make little differentiation between the average and the superior performer. The airman with the poorest APR score is only modestly penalized. Having looked at an in-depth profile of the enlisted force, let us now examine the promotion system in operation.

The Selection System at Work

Now that we have seen how a sample of the enlisted force's records array under WAPS criteria, it is appropriate to look into the manner in which the variables interplay to actually select airmen for promotion. In June 1978 the results of competition for promotion to technical sergeant (E-6) and master sergeant (E-7) were announced. Table 3 provides a breakdown of the results of that E-6 promotion cycle. The mean scores in each of the variables is provided for both the selectees and the nonselectees. There were 64,691 airmen in competition for E-6 of which only 11,570, or 17.9 percent, were selected.

TABLE 3
RESULTS OF 1978 E-6 CYCLE (6:7)

<u>Variable</u>	<u>Selectees</u>	<u>Non-selectees</u>
TIG	46.66	34.09
TIS	26.86	22.83
SKT	66.35	52.75
PFE	68.67	54.15
DEC	3.00	2.00
APR	133.37	131.69
TOTAL	333.56	288.32

The scores in table 3 are revealing because they show where the determination of promotion selection occurs. The overall seniority, time in service, for each group is fairly close. The average selectee had four points more than the average nonselectee, representative of two years' service. The time-in-grade figure reveals a 12-point differential, or two additional years as an E-5, which means that, on the average, both groups were promoted to E-5 at about the same career point. So the average selectee gained 16.60 points by virtue of seniority.

Looking at the test scores, one sees a differential of about 14 points between the two groups on each test, for a spread of 28.12 points on the two examinations.

When one examines the scores of the competitors in the two performance factors though, there is virtually no difference in the scores of the selectees and nonselectees. Only one point separates the two groups in decorations, and less than

two points separates them in their performance report scores. The average selectee scored only 2.68 points higher than the average nonselectee in performance. Figure 1 indicates that an APR mean of 8.50 would put an E-5 in the lowest 10 percent of the force from the standpoint of performance, yet this grossly poor performance record would reduce his WAPS score by only 7.5 points. This is easily overcome by simply waiting another year for promotion--six more points for time in grade and two more points for time in service. By correctly answering four more questions on each examination, he would overcome one of the worst performance records in the force and gain promotion along with his top performing contemporaries.

The airman can do nothing to alter the seniority scores. They are a given, based on when he or she joined the service and the date promoted to the current grade. The tests, on the other hand, offer a vehicle to accelerate one's advancement. Since only the very poorest performers on the job are penalized in their performance reports--and then only slightly--there is no motivation within the promotion system to excel on the job.

If the reader will recall, the Air Force testified before the congressional special subcommittee that the lowest 10 percent of the force would have a performance rating of five or less. Assuming that this projection had materialized, the mythical 8.50 performer referred to earlier would have gone into the promotion cycle with an APR mean of 5.0 or less! At best, he or she could attain an APR score of 75 points, 60 points

short of the maximum. The superior performer would now gain a sizable edge in the competition, and the nonperformer would face an almost insurmountable barrier to promotion. The author believes that this is what the congressmen had in mind.

TABLE 4
RESULTS OF 1978 E-7 CYCLE (6:7)

<u>Variable</u>	<u>Selectees</u>	<u>Non-selectees</u>
TIG	35.23	28.31
TIS	34.67	34.33
SKT	71.92	58.63
PFE	70.13	53.82
DEC	6.00	4.00
APR	134.39	133.76
TOTAL	340.80	303.67

The 1978 promotion cycle to master sergeant shows very similar results. There is a slight increase in the PFE differential between the selectees and nonselectees. The two performance factors played the same role as virtual nondiscriminators. But both groups had almost identical time-in-service scores, while the selectees scored almost seven points higher in time in grade. In other words, while both had been in the service for the same length of time, the master sergeant selectee had made technical sergeant roughly one year prior to the nonselectee. Since, from the previous analysis, we saw that this was likely due to higher test scores, one could argue that these higher test scores were, in effect, counted twice. More-

over, they got the airman promoted a year early, and thus allowed him or her to get a head start on the unsuccessful competitor in the race for the next promotion. Of course, the argument can be made that the airman gained an additional year's experience in the higher grade, and was thus more qualified for promotion. In actual practice, however, an airman may very well stay in the same job after promotion, as long as his or her Controlled Air Force Specialty Code (CAFSC) remains the same.

The point that emerges from our examination of actual promotion results is that the performance variables tend to provide little or no discrimination in the selection of airmen for promotion. The Air Force Times summed it all up by observing:

The 135 points possible for APRs carry almost 30 percent of the weight, but from the statistics, it is obvious that actual test scores far outweigh actual APR scores as promotion factors. . . . What all this comes down to is the fact that when the point spread on one factor is close, one or more other factors become more important in dividing winners from losers. (6:7)

CHAPTER IV

AIRMAN PERFORMANCE REPORT DISCRIMINATION

The data presented in the previous chapter demonstrated the lack of discrimination at the right-hand side of the curve by the overall rating on Airman Performance Reports. Since enlisted promotion quotas fall within this portion of the population, failure of the APRs to discriminate in this area negates their value as a selection factor. In the officer-promotion process and in the selection of enlisted personnel to grades E-8 and E-9, promotion boards physically review the total record of each contender for promotion. In this process, board members gain a sense of the performance history of the contenders and weigh this subjective evaluation along with the other aspects of the person's record. Thus, selections are made. The purpose of this chapter is to explore the Airman Performance Report in greater depth to determine if there is an element of discrimination beyond the "sameness" of overall ratings.

The Sample

Since the population and sample studied in the previous chapter were E-5s competing for promotion to E-6, it seemed appropriate to review APRs from the same portion of the enlisted force so comparisons could be made. A listing was drawn of all staff sergeants serviced by the Maxwell AFB CBPO.

There were 558 personnel on the listing, and they represented a cross section of the major commands and separate operating agencies of the Air Force: Air Training Command, Military Airlift Command, Tactical Air Command, Air Force Audit Agency, AF Data Design Center, and several small, tenant units.

After consultation with the Evaluation Directorate of Air War College, the decision was made to draw a random sample of 10 percent of this population for in-depth study. A target sample of 63 airmen was selected using the final digit of their Social Security account number, and of these, 60 records were available for examination. The other three had moved to other stations, and their records had not yet been deleted from the computer file. These 60 staff sergeants are the sample used in the statistical analyses in this chapter.

Methodology

As stated earlier, the purpose of this research was to determine the presence of discrimination in APRs, beyond the overall ratings which have such a strong right-hand bias. The APR has several areas which reveal the quality of an airman's performance, other than the overall rating captured in the WAPS computer model. There are seven measures of performance rated on the face of the form. These are: performance of duty, human relations, training, supervision, acceptance of NCO responsibility, bearing, and behavior. On the form's reverse, there are comments by the rating official and by one or more

indorsing officials. In the case of a staff sergeant, the minimum grade of the final indorsing official is master sergeant, and there can be a maximum of three indorsements.

A work sheet was developed to measure the ratings each airman had received in each rating area on the most recent APR, the number of indorsements that had been added, and the grade of the final indorser. An example of the work sheet may be found in the Appendix.

After each record had been reviewed and scored, the data were entered into the computer terminal at the Directorate of Evaluation to derive the statistics discussed below. (The assistance of the Directorate of Evaluation is hereby gratefully acknowledged.)

The data were entered in nine separate groupings, or models. Model A was the overall evaluation as captured in WAPS. This model was used primarily as a control for comparison with the APR data used in the previous chapter. The seven performance ratings mentioned above are all rated on a scale of zero to nine. Model B is the total of these ratings--a perfect score being 63. Model C is the mean of the ratings--9.0 is a perfect score.

The remainder of the models are excursions on models B and C. Model D is the total of the ratings with one point added to perfect scores for each additional indorsement, and model E makes the same addition to the mean. Models F and G add a factor to the rating total and mean respectively, based

on the grade of the final indorser. Since master sergeant is the minimum level of indorsement for an E-5, this was used as the base line. One point was added for indorsement by an E-8 or E-9, two points for a company grade officer, three for a major or lieutenant colonel, and four points were added for a colonel's indorsement. There were no general officer indorsements in the sample. In models H and I, the sums of the number and level of indorsement corrections are added to the rating total and mean respectively.

Evaluation of the Data

The statistics for the 60 case sample are displayed in table 5. The mean for model A--the control model--was 8.82, compared with the APR mean of 8.78 for the population of 70,000 airmen cited in chapter III and the 8.83 mean for the 300 airmen sample from that population. The 60 records randomly selected for this study appear to be a valid sample when compared with the total population of E-5s.

The spread between cases began to widen in models B and C, and continued to grow through each excursion. In models D and E, the reader will notice that the spread and standard deviation continue to increase. This increase continues with models F and G. In model G, if the scores were factored to fit the WAPS computer model, the airmen receiving the highest scores would amass double the promotion points of the lowest scoring airmen. This is in sharp contrast with the promotion board results displayed in the previous chapter.

TABLE 5

UNIVARIATE STATISTICS SAMPLE OF 60 MAXWELL APB E-5s

<u>Model</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	
A	8.82	9.00	0.504	7.00 - 9.00
B	61.60	63.00	3.62	45.00 - 63.00
C	8.80	9.00	0.517	6.43 - 9.00
D	62.20	63.50	3.92	45.00 - 65.00
E	9.41	9.50	1.00	6.43 - 11.00
F	63.90	66.00	4.75	45.00 - 67.00
G	11.10	12.00	2.01	6.43 - 13.00
H	64.50	67.00	5.11	45.00 - 69.00
I	11.70	13.00	2.49	6.43 - 15.00

NOTE:

Model A is the overall evaluation used in WAPS.
 Model B is the sum of the seven rating factors.
 Model C is the mean of the seven rating factors.
 Model D is Model B, plus the number of indorsements correction.
 Model E is Model C, plus the number of indorsements correction.
 Model F is Model B, plus the level of indorsement correction.
 Model G is Model C, plus the level of indorsement correction.
 Model H is Model B, plus both corrections.
 Model I is Model C, plus both corrections.

Model I presents the best opportunity to illustrate the manner in which the discrimination shown in APRs could affect the promotion process. The high end of the range lends itself to easy extrapolation into the WAPS formula. Since the high range is 15, changing the weighted value to nine would result in the 135 rating for a perfect score now awarded in WAPS. (15:29)

FIGURE 2

MODEL I DISTRIBUTION OF SAMPLE OF 60 MAXWELL AFB E-5s



Only four cases in the sample received a perfect score under model I and would be awarded the 135 points. They would gain nine points over the next 14 cases with their mean of 14-- or 126 "WAPS points." Thus there would be some differentiation at the high end of the group. The greatest advantage gained by the highest scorers would be over the poorest performers, as it should be. The bottom score was a performance mean of 6.43, which would translate to a "WAPS score" of 57.87 under model I

scoring. The top performer would now enjoy a promotion advantage of 77.13 points over the bottom performer. This is substantial, and would make performance a major factor in the promotion selection process. From the data described in the previous chapter, the perfect score on the 300-airmen sample had only a 25.95 point advantage over the poorest performance record, and there was almost no differentiation at the high end of the scores: one can see the marked difference in the scoring methods.

In model A, the portion of the APR actually captured in the WAPS model, 52 of the 60 sample cases had nines on the overall rating on their last performance report. Of these 52, only 43 had "perfect" nines when the seven rating factors were examined in model B. Their raters had made an attempt to signal that there was some difference between these individuals and the others who received perfect marks in each of the rating factors. And yet they all received identical credit toward promotion under WAPS.

Similarly, an examination of the way these 52 nines from model A fared when the adjustments were made in model D shows that there were further differences among those perfect cases when additional indorsements were considered. Of the 43 cases which scored 63 points in model B, 23 had a score of 64 for one additional indorsement and seven cases received the maximum score of 65 by having two additional indorsements. The rating officials appear to have been attempting to em-

phasize exceptional performance by sending the reports to their superiors for further indorsement. WAPS fails to perceive this nuance.

The reader will recall that the only purpose of this part of the study was to explore the possibility that there was observable discrimination in APRs which is not presently captured in the WAPS computer system. The author believes that the presence of reasonable discriminatory differences has been demonstrated and that the WAPS model is insufficiently sophisticated to capture this discrimination. In the case of officer and senior NCO promotion selection, the detection of these differences is the responsibility of a selection board. WAPS has not been revalidated against the selections of an actual promotion board since its original field test. It would seem that such a revalidation is long overdue.

CHAPTER V

SUMMARY DISCUSSION

The purpose of this chapter is two-fold. It attempts to tie the data presented earlier into a meaningful entity. Further, it serves as an executive summary for the reader whose time is limited and who wishes to forego review of the statistical evidence.

The Background

The basic goal of the Air Force is the same as that of any military organization--mission accomplishment. In this regard, a high level of productivity is as essential to a military organization as it is to industry. The reward of superior job performance by promotion can enhance performance and productivity. By the same token, employees who feel that their promotion will be unaffected by their job performance will have little incentive toward increased productivity.

Air Force personnel policy indicates the need to identify potential leaders and supervisors. This is a difficult task since those qualities which constitute leadership ability are largely intangible and defy quantification. Leadership has been described as control of interpersonal situations, and as the ability to motivate others to maximum effort. The Air Force enlisted promotion system is an attempt to blend three

promotion elements--seniority, appraisal of potential, and job performance--into a cohesive system.

The Purpose of WAPS

The Weighted Airman Promotion System was conceived in response to congressional criticism. Members of the House Committee on Armed Services had received many complaints from enlisted members about promotion policies. Over 90 percent of these complaints had come from Air Force personnel. Chairman Rivers formed a Special Subcommittee on Enlisted Promotion Policy Review to look into the matter. The main complaint centered around the lack of "visibility" in the extant promotion system of the Air Force. The airmen did not understand the workings of the selection boards then in use; did not know why they were not selected or how they ranked among their peers; and, most importantly, had no idea what they might do to enhance their chances for selection.

In response to the wishes of the special subcommittee, the Air Force developed a new promotion system which it hoped would be both visible and rational. Six factors were to be entered into a computer data base for each competing airman. These were the scores on two examinations--one to test job knowledge and the other to test military qualities--which would each carry a promotion weighting of 100 points for a perfect score. The mean of the last ten Airman Performance Reports would be weighted to a perfect score of 135 points. Both time

in grade and time in service were included with maximum points of 60 and 40 respectively. Decorations were also taken into consideration, with 25 points being the maximum allowable score. The APR score was the most heavily weighted of the six factors.

This heavy weighting of the performance factor was compatible with the literature cited above and with the guidance of the special subcommittee. The congressmen were particularly concerned about the way performance would play in the selection process because of the inflation in the performance reporting system. They were briefed on the Air Force's new performance reporting regulation, which would "control" ratings in line with a normal distribution. With this assurance, the special subcommittee agreed to the new Air Force promotion system.

WAPS was field tested in Alaskan Air Command by the Human Resources Laboratory. Promotion boards were used to select airmen for promotion. These board results were then compared to the selections made by the computer using the WAPS formula, and a correlation analysis was conducted. Since there was a high correlation between the board and computer results, it was felt unnecessary to conduct a board procedure in conjunction with the WAPS process. More than a decade has passed since then, but no further validation of WAPS against an actual promotion board has taken place. All attempts at a revalidation of the system have involved a "policy-capturing" technique developed at the Human Resources Laboratory. While this is a

very useful device for determining the relative importance board members give to various factors, it does not replace the functioning of an actual promotion board as was used in the original field test.

The Problem

It has been noted that the Air Force is interested in advancing potential leaders and supervisors by identifying superior performers. The difficulty of testing for these traits was underscored by the Assistant Secretary of Defense in his testimony before the special subcommittee. Realizing the difficulty of entering these leadership traits into an analytical model, the Air Force placed the heaviest weight in the promotion model on the subjective performance rating of the individual by his supervisor. These ratings were to be kept within a normal distribution to prevent inflation.

In the computer model, each factor acts to select airmen for promotion only to the extent to which it makes a discrimination among the contenders. If, for example, the Skill Knowledge Test were easy and everyone scored 100 percent, it would play no part in the selection process, and the relative weight of the other factors would be increased. In the case of performance ratings, if the guidelines of the regulation were not followed and all--or nearly all--of the contenders had a perfect score, performance would play little or no part in the process of selection. We will see through the examination

of promotion-cycle results just how this possibility has come to be a reality.

Performance as a Discriminator

Several promotion cycles were reviewed to determine the extent to which performance influences promotion selection. The statistical evaluation of the 1977-A selection cycle to technical sergeant was examined to capture the profile of the competing airmen. It was clear that both of the tests provided good distribution of scores. The SKT ranged from 29 to 92 with a mean of 56.66. Over 20 percent of the scores fell within the 56 to 60 modal range. The scores on the PFE were very similar with a range of 32 to 95, a mean of 66.30, and a modal range of 71 to 75. Both examinations approached a normal distribution, rewarding the high scorers with a substantial promotion advantage over the poor scorers.

Much the same observation was made regarding the two seniority factors, time in grade and time in service. The distribution was abnormal in that both factors had a right-hand skew, but they provided good discrimination. The more senior airmen gained a substantial number of points over more junior competitors, and could thereby overcome less than outstanding test scores.

The decorations scores were another matter. Most of the competing staff sergeants had no decorations. Zero was the mode with 58.33 percent of the sample. Another 31 percent

had three points, the equivalent of one Air Force Commendation Medal. It would seem that those few airmen who scored the maximum would have a substantial promotion advantage. But since the more heavily decorated airmen are thought to be in the combat specialties, and since they must compete for promotion within their area of speciality, the advantage is likely minimized.

Airman performance ratings were just the reverse of decorations. There was an extreme left-hand skew with most of the competitors having nearly perfect means. The means ranged from 7.27 to 9.00, with a mean of 8.83. Nearly 73 percent of the airmen had means between 8.76 and 9.00. Since the promotion quota to technical sergeant was only 18 percent, the quota fell in the range of perfect scores, and no discrimination was provided. An APR mean of 7.27, the lowest of the sample, would score 109.05 points under the weighted formula, and would suffer a penalty of only 25.95 points in competition with a perfect score of 135. This is in contrast to the poorest test scores which were penalized over 60 points on each test. Performance had little to do with promotion selection.

The 1978 cycle to technical sergeant was examined to see how the factors interacted to select promotees. There were 64,691 staff sergeants competing for technical sergeant. Of these, 11,570, or 17.9 percent, were selected for promotion. The average selectee had a 12-point advantage over the average nonselectee in time in grade and a four-point advantage in

time in service. The spreads in the tests were even greater, 14 points in the skill test and 12 points in the PFE. Decorations played little part in the process since the average selectee had three points as opposed to two for the average nonselectee. The scores for performance reports provided equally poor discrimination in that the selectees averaged 133.37 points against 131.69 for the nonselectees. Both the selectees and the nonselectees had nearly perfect performance scores.

From another perspective, there were fewer than four points separating the average of those who were selected from those who were not in the two performance factors, decorations and performance reports. Two additional questions correctly answered on each of the tests would have moved the average non-selectee into the promoted category. Performance played almost no part at all in the process.

Airman Performance Report Discrimination

The Weighted Airman Promotion System looks only at the mean of the last ten APRs for scoring in the computer model, that is to say, the mean of the overall ratings. That fact raises the question of whether there might not be some degree of discrimination in the performance reports that is beyond WAPS' scrutiny. A sample of staff sergeants' records was drawn at Maxwell AFB in order to gain further insight.

The most recent APRs of the 60 sample cases were examined, and the mean of the overall ratings was 8.82. This mean compared favorably with the statistics from the promotion cycles cited above. Of the 60 sample cases, 52 had received "nines" on their last APR. When a more thorough analysis was made of these reports, however, some interesting differences were noted. Many of the reports had one or more of the performance factors rated down, although the overall rating remained a nine. Many had additional indorsements layered to emphasize superior performance, and others had been elevated to senior officers for indorsement. In short, there was a discernible attempt on the part of the raters and indorsers to differentiate between various levels of job performance, given the inflation of APRs. The WAPS model is incapable of taking this discrimination into account since it reads only the overall rating on the APR. The raters are aware of the problem--the computer ignores it.

As we noted earlier, the original field test of WAPS compared the results of the computer selection process with promotion board results. Since then, performance ratings have inflated to the point that they no longer play any meaningful role in the promotion process. It is very likely that the computer is no longer selecting the same personnel that would be selected by a promotion board, though the assumption that it would do so was the original basis for the adoption of WAPS. The system has not been revalidated against an actual promotion board since its inception. It is high time that it was.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The first conclusion to be drawn from this study is that performance was intended to play a significant role in the selection process for airmen's promotions. The report of the Special Subcommittee on Enlisted Promotion Policy Review was fairly clear and specific. It stated that the primary promotion emphasis should be on skill--both knowledge and performance--and the system should provide a measurement of differences so the best qualified might be identified. Further evidence of the importance attached to skill is found in the results of the initial WAPS field test: the APR factor received the heaviest weighting of the six factors because of the stress promotion boards placed upon effective job performance. And, finally, the literature of personnel administration suggests that promotion based upon superior job performance serves as a motivator.

The examination of recent promotion cycles leads to a second conclusion. Because the Air Force has not enforced the normal distribution curve for APRs, as it assured the special subcommittee it would, the ratings have become inflated to the point that they play almost no part in the selection process. The E-5s competing for promotion to E-6 in 1977 had nearly perfect APR scores. Of the 73,000 competitors, 73 percent had

an average of 8.80 or better on their last ten APRs. Since the promotion quota was only 18 percent, the APR factor made almost no discrimination at the selection end of the distribution. At best, a modest penalty was assessed on the poorest performers, and this could easily be offset in the other areas. The outstanding performers were virtually indistinguishable from the average. Inflation of performance ratings has negated the heavy weight given them in the WAPS formula since nearly everyone has the same score.

Field research of airmen's records leads to another conclusion. All airmen do not perform at the same level of proficiency on their jobs. There are differences in quality of performance, and supervisors attempt to demonstrate these differences on the performance reports, given the problem of inflation. A substantial percentage of the airmen receiving overall ratings of nine had one or more of the performance-factor blocks marked down. Many raters sought additional indorsements to underscore superior performance. They are trying to send signals into the personnel system. WAPS reads only the overall rating for its data base and ignores the number and level of indorsements. It also fails to make a distinction between a "clean" nine and one which has some of the performance blocks rated down. In short, WAPS lacks sufficient sophistication to recognize the discriminatory nuances used by raters and indorsers. The discrimination is there, but WAPS cannot see it.

A final conclusion can be drawn regarding the process of system revalidation. The original field test matched the computer selection against actual promotion board results. Indeed, the high correlation of the results was the basis for the recommendation that boards not be used in conjunction with the computerized WAPS process. While the "policy-capturing" technique used by the Human Resources Laboratory is extremely useful in setting weight factors, it does not replace the interaction of a selection board with access to the full records of the competitors. This was the way WAPS was initially validated, and is the way any future validations should be conducted. The emphasis should be on determining if WAPS is promoting the best and most promising people.

Recommendations

There has not been a revalidation of WAPS which made a comparison of computer selections and those of an actual promotion board since the original field test in 1969. The author believes that such a revalidation is long overdue in light of the extreme inflation in performance ratings. It is therefore recommended that such a revalidation be made as soon as possible. An actual promotion-board process is the only way to replicate the original validation; use of the "policy-capturing" technique, while simpler, will not suffice.

Another recommendation concerns the allocation of promotions. Putting a certain number of promotions back into

commander's hands would partially solve the inflation problem. The command structure could assure the promotion of the most superior performers, thereby directly rewarding effectiveness and providing additional job motivation. Good performers who for various reasons do not test well could be promoted to maintain the motivation of this segment of the force. A new program called Stripes for Exceptional Performers (STEP) is a first step in this direction. Promotion quotas were allocated to major commanders to award within their command. The number of STEP promotions is small--only 116 from October through April--but the author believes the idea sound in light of the findings of this study.*

Logic leads one to conclude from the study that controlled distribution of ratings in the performance report, as briefed to the special subcommittee, ought to be enforced. The author is loathe to offer this suggestion, however, because of the Air Force's recent experience with Officer Effectiveness Reports. Whatever the merit of the idea in the academic sense, reality indicates that it is a questionable solution.

*An update of the test of Stripes for Exceptional Performers (STEP) can be found in Air Force Times, 30 March 1981, p. 3, or from the Air Staff OPR, AF/MPXOP.

APPENDIX

TABLE 6

DISTRIBUTION OF SKT SCORES FOR SAMPLE OF 300 AIRMEN (17:22)

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
25-35	9	3.00
36-40	21	7.00
41-45	31	10.33
46-50	43	14.33
51-55	40	13.33
56-60	61	20.33
61-65	34	11.33
66-70	30	10.00
71-75	19	6.33
76-80	5	1.67
81-85	3	1.00
86-90	3	1.00
91-95	1	.33

TABLE 7

DISTRIBUTION OF PFE SCORES FOR SAMPLE OF 300 AIRMEN (17:23)

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
31-35	4	1.33
36-40	1	.33
41-45	5	1.67
46-50	12	4.00
51-55	21	7.00
56-60	40	13.33
61-65	43	14.33
66-70	57	19.00
71-75	65	21.67
76-80	36	12.00
81-85	12	4.00
86-90	3	1.00
91-95	1	.33

TABLE 8

DISTRIBUTION OF TIS SCORES FOR SAMPLE OF 300 AIRMEN (17:23)

5 yrs - 6 yrs 11 mos	24	8.00
7 yrs - 8 yrs 11 mos	80	26.67
9 yrs - 10 yrs 11 mos	86	28.67
11 yrs - 12 yrs 11 mos	53	17.67
13 yrs - 14 yrs 11 mos	24	8.00
15 yrs - 16 yrs 11 mos	23	7.67
17 yrs - 18 yrs 11 mos	7	2.33
19 yrs - 19 yrs 11 mos	3	1.00

TABLE 9

DISTRIBUTION OF TIS SCORES FOR SAMPLE OF 300 AIRMEN (17:23)

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
1 yr 10 mos - 2 yrs 11 mos	43	14.33
3 yrs - 3 yrs 11 mos	51	17.00
4 yrs - 4 yrs 11 mos	49	16.33
5 yrs - 5 yrs 11 mos	58	19.33
6 yrs - 6 yrs 11 mos	44	14.67
7 yrs - 7 yrs 11 mos	28	9.33
8 yrs - 8 yrs 11 mos	13	4.33
9 yrs - 10 yrs 11 mos	14	4.67

TABLE 10

DISTRIBUTION OF DEC SCORES FOR SAMPLE OF 300 AIRMEN (17:24)

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
0	175	58.33
3	93	31.00
5	3	1.00
6	17	5.67
8	3	1.00
9	3	1.00
11	1	.33
12	2	.67
21	1	.33
25	2	.67

TABLE 11

DISTRIBUTION OF APRM SCORES SAMPLES OF 300 AIRMEN (17:24)

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
7.26 - 7.50	2	.68
7.51 - 7.75	4	1.33
7.76 - 8.00	4	1.33
8.01 - 8.25	5	1.67
8.26 - 8.50	11	3.67
8.51 - 8.75	56	18.67
8.76 - 9.00	218	72.67

TABLE 12

MODEL A DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
7	3	5.00
8	5	13.33
9	52	86.67

TABLE 13

MODEL B DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
45	1	1.67
50	2	3.33
53	1	1.67
54	1	1.67
59	1	1.67
60	1	1.67
61	5	8.33
62	5	8.33
63	43	71.67

TABLE 14

MODEL C DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
6.43	1	1.67
7.12	2	3.33
7.57	1	1.67
7.71	1	1.67
8.43	1	1.67
8.57	1	1.67
8.71	5	8.33
8.86	5	8.33
9.00	43	71.67

TABLE 15

MODEL D DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
45	1	1.67
50	2	3.33
53	1	1.67
54	1	1.67
59	1	1.67
60	1	1.67
61	5	8.33
62	5	8.33
63	13	21.67
64	23	38.33
65	7	11.67

TABLE 16

MODEL E DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
6.43	1	1.67
7.14	2	3.33
7.57	1	1.67
7.71	1	1.67
8.43	1	1.67
8.57	1	1.67
8.71	5	8.33
8.86	5	8.33
9.00	13	21.67
10.00	23	38.33
11.00	7	11.67

TABLE 17

MODEL F DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
45	1	1.67
50	2	3.33
53	1	1.67
54	1	1.67
59	1	1.67
60	1	1.67
61	5	8.33
62	5	8.33
63	2	3.33
65	5	8.33
66	16	26.67
67	20	33.33

TABLE 18

MODEL G DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
6.43	1	1.67
7.14	2	3.33
7.57	1	1.67
7.71	1	1.67
8.43	1	1.67
8.57	1	1.67
8.71	5	8.33
8.86	5	8.33
9.00	2	3.33
11.00	5	8.33
12.00	16	26.67
13.00	20	33.33

TABLE 19

MODEL H DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
45	1	1.67
50	2	3.33
53	1	1.67
54	1	1.67
59	1	1.67
60	1	1.67
61	5	8.33
62	5	8.33
63	2	3.33
65	4	6.67
66	5	8.33
67	14	23.33
68	14	23.33
69	4	6.67

TABLE 20

MODEL I DISTRIBUTION SAMPLE OF 60 MAXWELL AIRMEN

<u>Interval</u>	<u>Number</u>	<u>Percent</u>
6.43	1	1.67
7.14	2	3.33
7.57	1	1.67
7.71	1	1.67
8.43	1	1.67
8.57	1	1.67
8.71	5	8.33
8.86	5	8.33
9.00	2	3.33
11.00	4	6.67
12.00	5	8.33
13.00	14	23.33
14.00	14	23.33
15.00	4	6.67

DECORATIONS POINT VALUES FOR WAPS

Medal of Honor	15
Air Force Cross.	11
Navy Cross	11
Distinguished Service Cross.	11
Defense Distinguished Service Medal.	9
Distinguished Service Medal.	9
Silver Star.	9
Legion of Merit.	7
Defense Superior Service Medal	7
Distinguished Flying Cross	7
Airman's Medal	5
Soldier's Medal.	5
Navy-Marine Corp's Medal	5
Coast Guard Medal.	5
Bronze Star Medal.	5
Defense Meritorious Service Medal	5
Meritorious Service Medal.	5
Air Medal.	3
Air Force Commendation Medal	3
Army Commendation Medal.	3
Navy Commendation Medal.	3
Joint Services Commendation Medal.	3
Coast Guard Commendation Medal	3
Navy Achievement Medal	3
Coast Guard Achievement Medal.	3
Purple Heart	1

APR FIELD RESEARCH WORK SHEET

NAME _____

SSAN _____

1. Performance of duty:	N/O	0	1	2	3	4	5	6	7	8	9
2. Human Relations:	N/O	0	1	2	3	4	5	6	7	8	9
3. Training:	N/O	0	1	2	3	4	5	6	7	8	9
4. Supervision:	N/O	0	1	2	3	4	5	6	7	8	9
5. Acceptance of NCO responsibility:	N/O	0	1	2	3	4	5	6	7	8	9
6. Bearing:	N/O	0	1	2	3	4	5	6	7	8	9
Behavior:	N/O	0	1	2	3	4	5	6	7	8	9
Overall Evaluation:		0	1	2	3	4	5	6	7	8	9

Number of Indorsements

Level of Indorsement

1

* Master Sergeant

2

* Sr or Chf Master Sergeant

3

* Company Grade Officer

* Major or Lieutenant Colonel

* Colonel

I. RATEE IDENTIFICATION DATA (Read AFR 39-62, Vol I, carefully before completing any item.)																													
1 NAME (Last, First, Middle Initial)					2 SSAN			3 GRADE																					
4. ORGANIZATION, COMMAND, LOCATION AND PAS CODE					5 PERIOD OF REPORT AND SUPERVISION			6 REASON FOR REPORT																					
					FROM		NO. OF DAYS	CHANGE OF RATER																					
					THROUGH			ANNUAL																					
					7 PAFSC			8 DAFSC		9 CAFSC		DIRECTED BY																	
II. JOB DESCRIPTION:																													
III. EVALUATION OF PERFORMANCE																													
1. PERFORMANCE OF DUTY: Consider the quantity, quality, and timeliness of duties performed as described in Section II.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9																				
1ST INDORSER		N/O																											
2. HUMAN RELATIONS: Consider how well ratee supports and promotes equal opportunity, shows concern and is sensitive to needs of others.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
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1ST INDORSER																													
3. TRAINING: Consider how well responsibilities are discharged as an OJT supervisor, trainer and in other efforts to improve knowledge and educational level.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9																				
1ST INDORSER		N/O																											
4. SUPERVISION: Consider how ratee supervises, leads, uses available resources, communicates (oral and written), and maintains good order and discipline.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9																				
1ST INDORSER		N/O																											
5. ACCEPTANCE OF NCO RESPONSIBILITY: Consider ratee's acceptance of responsibility for personal actions and those of subordinates.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
0	1	2	3	4	5	6	7	8	9																				
1ST INDORSER		N/O																											
6. BEARING AND BEHAVIOR: Consider the degree to which ratee's bearing and behavior on and off duty improve the image of Air Force noncommissioned officers.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
				0	1					2	3	4	5	6	7	8	9												
				1ST INDORSER						N/O																			
		N/O																											
		N/O																											
IV. OVERALL EVALUATION																													
How does the ratee compare with others of the same grade and Air Force specialty? Potential for promotion and increased responsibility are essential considerations in this rating.				RATER		<table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>0</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table>														0	1	2	3	4	5	6	7	8	9
				0	1					2	3	4	5	6	7	8	9												
				1ST INDORSER																									
2D INDORSER																													
3D INDORSER																													

V. RATER'S COMMENTS

NAME, GRADE, BRANCH OF SERVICE, ORGANIZATION, COMMAND AND LOCATION	DUTY TITLE	DATE
	SSAN	SIGNATURE

VI. 1ST INDORSER'S COMMENTS	<input type="checkbox"/> CONCUR	<input type="checkbox"/> NONCONCUR

NAME, GRADE, BRANCH OF SERVICE, ORGANIZATION, COMMAND AND LOCATION	DUTY TITLE	DATE
	SSAN	SIGNATURE

VII. 2D INDORSER'S COMMENTS	<input type="checkbox"/> CONCUR	<input type="checkbox"/> NONCONCUR

NAME, GRADE, BRANCH OF SERVICE, ORGANIZATION, COMMAND AND LOCATION	DUTY TITLE	DATE
	SSAN	SIGNATURE

VIII. 3D INDORSER'S COMMENTS	<input type="checkbox"/> CONCUR	<input type="checkbox"/> NONCONCUR

NAME, GRADE, BRANCH OF SERVICE, ORGANIZATION, COMMAND AND LOCATION	DUTY TITLE	DATE
	SSAN	SIGNATURE

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